Hi•Feed Mini™

Insert Series:
- UNLU0603

Face Mills:
- TG1F

End Mills & Modular:
- 1TG1F

Insert Grades:
- IN2505
- IN2504
- IN2530
- IN2030
- IN2035
- IN7035
- IN6530

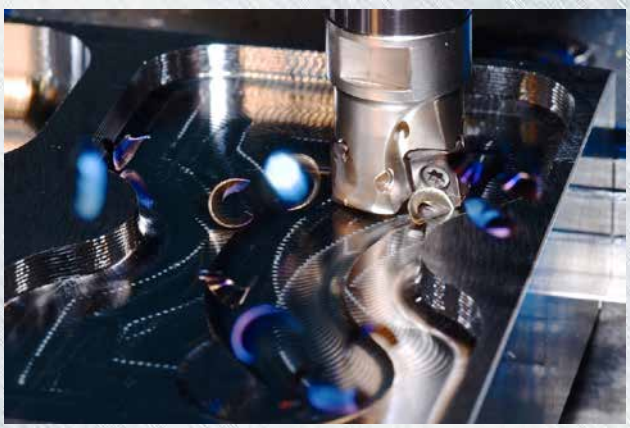
Applications:
- Die & Mold
- Aerospace
- General Purpose

UPDATED PRODUCT ANNOUNCEMENT *2015*

High Feed Milling Cutter Family Offers Increased Productivity!!

The Hi•Feed Mini milling cutters offer exceptional milling performance. The smaller 6mm IC high feed insert allows maximum cutter densities for great productivity! Optimal insert geometries, the lastest grades, strong insert clamping and solid high feed design ensure worry-free machining! Let the Hi•Feed Mini stream line your milling process!

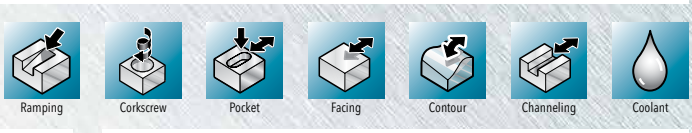
FEATURES AND BENEFITS
- Available in end mill, modular head and face mill type;
  NEW! Now available in Chip•Surfer style!
- Up to .039" (1 mm) DOC capability
- 4 indexes provide for cost-effective machining
- Strong positive insert rake face angles for efficient milling
- Rigid clamping & high tensile clamping screw, M2.5
- Lower cutting force
- Higher insert densities increase productivity even more!

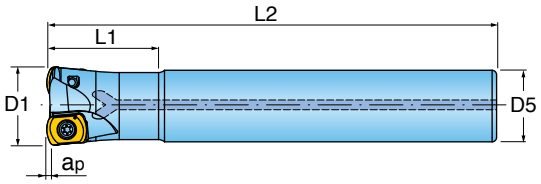


Member IMC Group Ingersoll Cutting Tools

HI-FEED MINI™ SERIES 1TG1F

HI-FEED END MILLS WITH 4 INDEXES

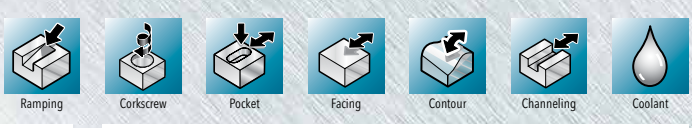


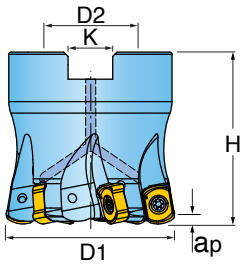


Cutter Number	D1 Nom. Diameter	L1 Extension Length	L2 Overall Length	D5 Shank Size/Style	ap Max. DOC	Number of Inserts	Coolant
1TG1F-06015ULR01	0.625	1.160	4.000	15.5mm Cyl	0.027	2	Yes
1TG1F-06015S6R01	0.625	1.170	4.000	.625" Cyl	0.027	2	Yes
1TG1F-07017UMR01	0.750	1.430	5.000	18.5mm Cyl	0.027	3	Yes
1TG1F-07017UMR02	0.750	1.430	6.250	18.5mm Cyl	0.027	3	Yes
1TG1F-07022S7R01	0.750	1.940	5.000	.750" Cyl	0.027	3	Yes
1TG1F-07032S7R01	0.750	2.940	6.250	.750" Cyl	0.027	3	Yes
1TG1F-08019UNR01	0.875	1.700	7.750	21.5mm Cyl	0.039	3	Yes
1TG1F-10022T5R01	1.000	1.940	7.000	25mm Cyl	0.039	4	Yes
1TG1F-10022S1R01	1.000	1.940	10.000	1.000" Cyl	0.039	4	Yes
1TG1F-10022T5R02	1.000	1.940	10.000	25mm Cyl	0.039	4	Yes
1TG1F-10032S1R01	1.000	2.940	7.000	1.000" Cyl	0.039	4	Yes
1TG1F-1203281R01	1.250	2.940	5.500	1.250" W	0.039	5	Yes
1TG1F-12050E2R01	1.250	4.690	8.000	1.250" W	0.039	5	Yes
1TG1F-15015E2R01	1.500	1.690	6.000	1.250" W	0.039	6	Yes

HI-FEED MINI™ SERIES TG1F

HI-FEED FACE MILL WITH 4 INDEXES

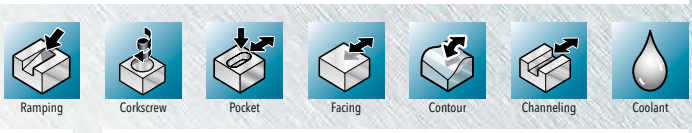


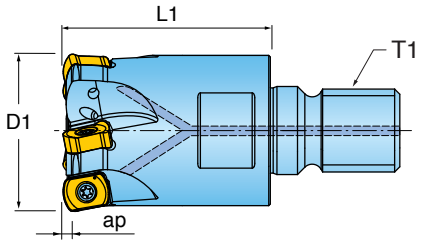


Cutter Number	D1 Max. Diameter	D2 Bore Diameter	H Effective Extension	ap Max. DOC	Number of Inserts	K Keyway	Coolant
TG1F-20R01	2.000	0.750	1.970	0.043	7	0.312	Yes

HI-FEED MINI™ SERIES 1TG1F (TOP-ON STYLE)

HI-FEED MODULAR END MILLS WITH 4 INDEXES

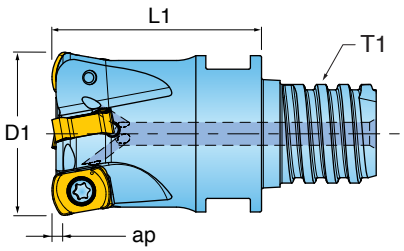




Cutter Number	D1 Nom. Diameter	L1 Extension Length	T1 Connection	ap Max. DOC	Number of Inserts	Coolant
1TG1F-06010X5R01	0.625	0.980	M8	0.027	2	Yes
1TG1F-07011X6R01	0.750	1.180	M10	0.027	3	Yes
1TG1F-10013X7R01	1.000	1.370	M12	0.039	4	Yes
1TG1F-12015X8R01	1.250	1.570	M16	0.039	5	Yes
1TG1F-15015X8R10	1.500	1.570	M16	0.039	6	Yes

HI-FEED MINI™ SERIES 1TG1F (CHIP-SURFER STYLE)

HI-FEED MODULAR END MILLS WITH 4 INDEXES



Cutter Number	D1 Nom. Diameter	L1 Extension Length	T1 Connection	ap Max. DOC	Number of Inserts	Coolant
NEW! 1TG1F-06008TRR01	0.625	0.827	T10	0.028	2	Yes
NEW! 1TG1F-07010TSR01	0.750	1.025	T12	0.032	3	Yes
NEW! 1TG1F-10012TUR01	1.000	1.260	T15	0.043	4	Yes

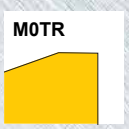
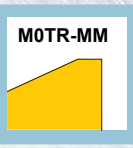
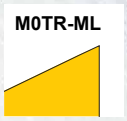
HIFEED MINI™ 06MM INSERTS

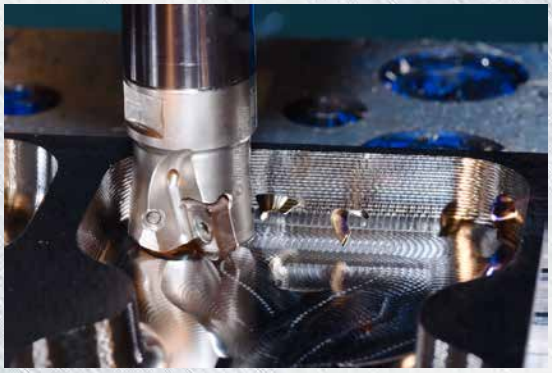
UNLU0603M0TR

UNLU0603M0TR-MM

UNLU0603M0TR-ML

Part Number	Applications	GRADE IN2505	IN2504	IN2530	IN2035	IN7035
UNLU0603M0TR	Multi-Purpose	•	•	•	•	
UNLU0603M0TR-MM	Multi-Purpose - Keen Edge	•	•	•	•	•
UNLU0603M0TR-ML	High-Positive - Keen Edge	•		•	•	•

Detail	Insert Number	Description
	UNLU0603M0TR	**Multi-Purpose** Extra strong positive rake face geometry for machining steel and various high temp alloys.
	UNLU0603M0TR-MM	**Multi-Purpose - Keen Edge** Strong, positive rake face geometry well suited for machining of various high temperature alloys and standard steels. Keen edge, which promotes lower cutting forces and free shearing action.
	UNLU0603M0TR-ML	**High-Positive - Keen Edge** Sharp, positive rake face geometry well suited for machining of various high temperature alloys providing optimal shearing action.



HIOFEED MINI™ HARDWARE

Cutter Number	 Screw	Torque Specification	 Driver	 Retention Bolt	 Coolant Bolt
1TG1F-06008TRR01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-07010TSR01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-10012TUR01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-06015ULR01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-06015S6R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-07017UMR01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-07017UMR02	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-07022S7R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-07032S7R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-08019UNR01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-10022T5R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-10022S1R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-10022T5R02	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-10032S1R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-1203281R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-12050E2R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-15015E2R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-06010X5R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-07011X6R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-10013X7R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-12015X8R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
1TG1F-15015X8R10	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	N/A	N/A
TG1F-20R01	SM25-064-00	Torque 10-15 in. lbs.	DS-T08W	SD-06-48	SD-06-89

HIOFEED MINI™ 1TG1F, TG1F OPERATING GUIDELINES

Material		Brinnell Hardness	SFM	Feed per Insert	IN2505	IN2504	IN2530	IN2035	IN7035	Coolant
Steel	Mild 1018-1045	200-400	425-985	.015 - .045	1	3	2			NO
	Low Alloy 4140, 8620, 4340	150 - 425	350-900		1	3	2			
	Medium Alloy P20, S7, H13, O1, A2		300-850	.015-.035	1		2			
	High Alloy A7-D2	375 - 625	400-650	.012-.030	2	1	3			
Hardened Steel	All	375 - 625	400-650	.012-.030	1					NO
Stainless Steel	Free Machining 303, 416	200-425	250-550	.010-.025			3	1	2	YES
	300 Series, 304, 310, 316									
	400 Series 410, 420, 15-5PH, 17-4PH									
	PH Series 13-8									
Titanium	6AL-4V	n/a	90-275	.004-.020			3	1	2	YES
High Temp Alloy	Inconel	n/a	70-125	.004-.020			3	2	1	YES

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.